

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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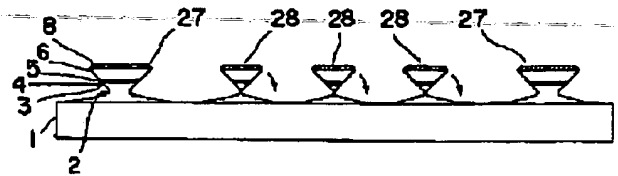
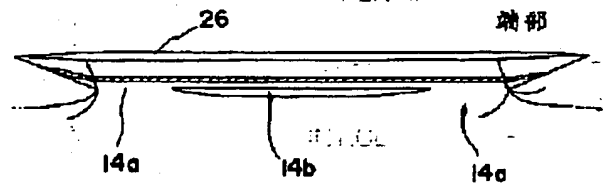
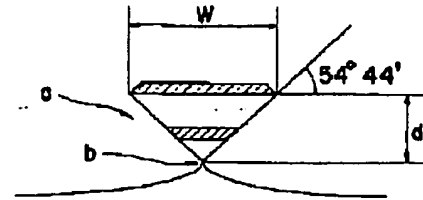
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APPLICANT : FUJIKURA LTD;

INVENTOR : SEKIGUCHI TOSHISADA;

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TITLE : STRIPE ETCHING METHOD FOR SEMICONDUCTOR WAFER



ABSTRACT : PURPOSE: To make the depth of stripe controllable with good reproducibility and to improve the productivity and yield by detecting a change in the amount of diffracted light from a stripe for monitoring with an etching monitoring stripe pattern and then ending the etching based on said change.

CONSTITUTION: An width  $W$  of a stripe a for etching monitor is determined based on a target depth  $d$  for completing the etching. In a photolithographic process, a stripe pattern 26 for etching monitor is formed to a wafer in accordance with the stripe width  $W$  determined together with the stripe pattern 26. In the etching process, a stripe is formed on the wafer by etching the wafer on which each stripe pattern 26 has been formed, and the change in the amount of diffracted light from a monitoring stripe 28 formed on the wafer is detected with the stripe pattern 26 for etching monitor. Etching is completed based on the change in the amount of diffracted light detected. By doing this, the depth of stripe can be controlled with good reproducibility.

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